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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/485,464	02/04/2000	KENJI YAMAMURA	48531	1948

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EXAMINER
WESSMAN, ANDREW E

ART UNIT	PAPER NUMBER
1742	8

DATE MAILED: 02/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

mk - 8

Office Action Summary	Application No.	Applicant(s)	
	09/485,464	YAMAMURA ET AL.	
	Examiner	Art Unit	
	Andrew E Wessman	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 December 2001* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5 and 11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 11* is/are rejected.

7)☒ Claim(s) *3 and 5* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Claims 1-5 remain for examination. Claims 6-10 have been cancelled, and claim 11 has been added.

Claim Rejections - 35 USC § 112

2. In view of applicant's amendment and accompanying remarks, the rejection of claims 1, 2, and 4 under 35 USC 112, first paragraph has been withdrawn.

Claim Objections

3. Claims 3 and 5 are objected to because of the following informalities: The terms martensite and martensitic have been misspelled in these claims and also throughout the spcification as "maltensite" and "maltensitic". Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 2, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al.

Matsumoto et al. is applied to the claims for the same reasons as set forth in paper No. 5, paragraph 7.

6. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al. in view of Tanaka et al.

Matsumoto et al. in view of Tanaka et al. is applied to claims 3 and 5 for the same reasons as set forth in paper No. 5, paragraph 8.

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al.

Matsumoto et al. discloses a bearing in which the bearing ring and/or a rolling element comprises a steel containing alloy ingredients of 0.2 to 1.23wt% C (table 1), 0.40wt% or less Si (table 1), 2.0wt% or less Mn (col. 5, line 44), 1wt% and 2wt% Cr (table 1) and 2wt% or less Mo (col. 5, line 36). Matsumoto et al. further discloses that the heat treatment of the steel includes carbonitriding, hardening and tempering (col. 5, lines 3-4) and also discloses that the amount of retained austenite is less than 10 volume% (col. 4, lines 44-45). Matsumoto et al. also discloses a hardness of greater than 60 HRC.

Matsumoto et al. discloses that the retained austenite is less than 10vol%, but does not specifically give examples of 0vol% retained austenite.

Matsumoto et al. discloses that the dimensional stability of the bearing is better when the average concentration of retained austenite is lower. Hence, there would be motivation to have 0% retained austenite so as to improve the dimensional stability. It is well known in the prior art to have bearings with 0vol% austenite for the purpose of producing bearings with high dimensional stability (see prior art reference Hirakawa et al., cited in the previous office action as pertinent prior art). It would have been obvious to one having ordinary skill in the art at the time the invention was made to find the optimum range of retained austenite, i.e. 0 vol%, since it has been held that where the

general conditions of the claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation, *In re Aller*, 105 USPQ 233.

Response to Arguments

8. Applicant's arguments filed December 12, 2001 have been fully considered but they are not persuasive. In the remarks, applicant argues:

(1) The levels of retained austenite in the Matsumoto et al. disclosure vary with position within an element, and the value is never 0%;

(2) The heat treatments of Matsumoto et al. are performed at different temperatures;

(3) Matsumoto et al. does not disclose the composition of the steel specimen of the instant invention; and

(4) There is no motivation to combine the teachings of Matsumoto et al. and Tanaka et al.

In response to applicant's argument (1), as stated in paper No. 5, paragraph 2, the teachings of Matsumoto et al. cannot be limited to only the preferred embodiments but must be taken in their entirety. Matsumoto et al. teaches that retained austenite should less than 10%, which encompasses 0%. Matsumoto et al. also provides motivation for doing so, stating that enhanced dimensional stability is encouraged by the elimination of retained austenite. Furthermore, were one to create a bearing with 0% retained austenite in its entirety, there would be no variation in composition within the article.

In response to applicant's argument (2), while Matsumoto et al. may teach heat treating at a different temperature than the instant invention, the temperature is never claimed in the instant invention, and this difference cannot be used to argue the patentability of the claims. Additionally, changing the temperature of a known process is not considered inventive unless evidence of an unexpected result is provided.

In response to applicant's argument (3), while Matsumoto et al. does not provide a specific example of a steel of applicant's composition in table 1, Matsumoto et al. teaches (col. 5, lines 30-36) the function of molybdenum and that it can be present from 0-2.0 wt%. The teachings of Matsumoto et al. must be considered in their entirety, and a reading of Matsumoto et al. cannot be limited to just the examples.

In response to applicant's argument (4), in paper No. 5, paragraph 8 the examiner states that Tanaka et al. provides teachings in the same field of endeavor for preventing adhesion, decreasing friction, and significantly improving fretting wear resistance by providing a nitride layer on a rolling member. The motivation to combine the teachings of Tanaka et al. with Matsumoto et al. would be to create a rolling member as taught by Matsumoto et al. with decreased friction, prevented adhesion, and improved fretting wear resistance as taught by Tanaka et al.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew E Wessman whose telephone number is (703)305-3163. The examiner can normally be reached on Monday through Friday, 8:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (703)308-1146. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9310 for regular communications and (703)872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

Application/Control Number: 09/485,464
Art Unit: 1742

AEW
February 19, 2002

ROY KING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700